

WE CLAIM:

1. A method for treatment of a patient suffering from a systemic disorder or disease, comprising administering to the lung a transgene delivery vector, said transgene delivery vector comprising a nucleotide sequence which encodes for a therapeutic protein, such that the transgene delivery vector transfects lung cells, expresses the therapeutic protein, and the therapeutic protein enters into the patient's circulatory system.
2. The method of claim 1, wherein the systemic disorder or disease is a lysosomal storage disease.
3. The method of claim 1, wherein the patient is suffering from Gaucher's Disease, and the transgene delivery vector comprises a nucleotide sequence encoding glucocerebrosidase.
4. The method of claim 1, wherein the patient is suffering from Niemann-Pick Disease, and the transgene delivery vector comprises a nucleotide sequence encoding acid sphingomyelinase.
5. The method of claim 1, wherein the patient is suffering from Fabry Disease, and the transgene delivery vector comprises a nucleotide sequence encoding alpha-galactosidase.
6. The method of claim 1, wherein the patient is suffering from Pompe's Disease, and the transgene delivery vector comprises a nucleotide sequence encoding alpha glucosidase.
7. The method of claim 1, wherein the patient is suffering from Hurler's Disease, and the transgene delivery vector comprises a nucleotide sequence encoding alpha-L-iduronidase.
8. The method of claim 1, wherein the patient is suffering from Hunter's Disease, and the transgene delivery vector comprises a nucleotide sequence encoding iduronate sulfatase.
9. The method of claim 1, wherein the patient is suffering from Morquio Syndrome, and the transgene delivery vector comprises a nucleotide sequence encoding galactosamine-6-sulfatase.
10. The method of claim 1, wherein the patient is suffering from Maroteux-Lamy Disease, and the transgene delivery vector comprises a nucleotide sequence encoding arylsulfatase B.
11. The method of claim 1, wherein the systemic disorder or disease is a blood clotting deficiency.
12. The method of claim 1, wherein the patient is suffering from hemophilia A, and the transgene delivery vector comprises a nucleotide sequence encoding Factor IX.
13. The method of claim 1, wherein the patient is suffering from hemophilia B, and the transgene delivery vector comprises a nucleotide sequence encoding Factor VIII.

14. The method of claim 1, wherein the patient is suffering from hemophilia B, and the transgene delivery vector comprises a nucleotide sequence encoding Factor VIIA.
15. The method of claim 1, wherein the patient is suffering from von Willebrand's Disease, and the transgene delivery vector comprises a nucleotide sequence encoding von Willebrand's Factor.

5

Patent 5,943,659